Amendments to the Drawings

The attached sheet of drawings includes changes to Fig. 4. This sheet, which includes Fig. 4, replaces the original sheet including Fig. 4. In Fig. 4, one of the two arrows on the bottom portion of numeral 52 has been removed.

Attachment: Replacement Sheet

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REMARKS/ARGUMENTS

In the Specification, the paragraphs [0025] and [0027] have been amended to correct minor editorial problems; no new matter has been introduced.

In amended Figure 4, one of the two arrows on the bottom portion of numeral 52 has been removed to overcome the objection to the drawings.

Claims 1-11 are pending in this application. Claims 1-11 were rejected. Claims 1-5, 7-9, and 11 have been amended as indicated hereinabove.

Claim 11 was rejected under 35 U.S.C. 101 as directed to non-statutory subject matter. Claim 11 has been amended to overcome this rejection. Amended Claim 11 is directed to patentable subject matter and should be allowed.

Claims 3 and 4 were rejected under 35 U.S.C. 112, second paragraph. Claims 3 and 4 have been amended to overcome this rejection. Amended Claims 3 and 4 are in compliance with 35 U.S.C. 112, second paragraph, and should be allowed.

Claims 1-5, 7, 8, 9 and 11 were rejected under 35 U.S.C. 102(b) over Fogg (US Patent 6,466,624 B1). This rejection is respectfully traversed for the following reasons.

Applicant respectfully points out that Fogg cannot be a 102(b) reference against referenced Claims. The present application was filed in the US on August 1, 2003. That means that the critical date for 102(b) art is August 1, 2002. The Fogg patent was published on October 15, 2002, after the critical date. Therefore, Fogg does not anticipate the referenced Claims under 35 U.S.C. 102(b). That rejection should be withdrawn.

Applicant proceeds on the assumption that the Examiner meant to reject Claims 1-5, 7, 8, 9 and 11 under 35 U.S.C. 102(e) over Fogg (US Patent 6,466,624 B1). This rejection is respectfully traversed for the following reasons.

It is well established that a claim is anticipated under 35 U.S.C. §102, only if each and every element of the claim is found in a single prior art reference.[1] Moreover, to anticipate a claim under 35 U.S.C. §102, a single source must contain each and every element of the claim "arranged as in the claim."[2,3] Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference.[4] If each and every element of a claim is not found in a single reference, there can be no anticipation.

Fogg describes a device for enhancing the quality of output of a decoder processing a "standard-coded digital video signal" (col. 3 line 50) "source bitstream" of Fig. 6. The video signal encodes a sequence of original pre-encode images or "frames" acquired outside of the Fogg's device.

Fogg produces reconstructed frames from the encoded video data (col. 15, lines 8-26); however, it is important to note that the decoded images are different from the original images: "the decoded picture serves as an initial estimate of the original (i.e. pre-encode) picture" (col. 16, lines 9-11). The decoded images are inherently different from the original acquired images because of the unavoidable data alteration introduced by compression during encoding and decoding.

Fogg also obtains pixel motion trajectories using pixel motion data inherent in the encoded signal's format, such as MPEG. Subsequently, Fogg performs enhancement of the decoded images using filters along the pixel motion trajectories.

Contrary to Fogg, in the present invention the filters operate on original acquired images along the trajectories calculated using the original acquired images.

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[1] Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).
[2] Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984).
[3] Lewmar Marine Inc. v. Barient, Inc., 827 F.2d 744, 747, 3 U.S.P.Q. 2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988).
[4] Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

The amended Claim 1 comprises the elements of determining a respective displacement vector and trajectory from the acquired images and applying an operation to the same acquired images along the trajectory. This combination of elements is not found in Fogg or in any other publication cited by the Examiner in this Office Action. Therefore, amended Claim 1 is patentable over Fogg under 35 U.S.C. 102(e) and should be allowed.

The above-presented argument also supports patentability of Claims 2-5, 7, 8, 9 and 11. Allowance of the referenced Claims is respectfully solicited.

Claims 6 and 10 were rejected under 35 U.S.C. 103(a) over Fogg in view of Nybo et al. (US Patent Application Publication No. US 2001/0052933 A1). This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.[5] The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.[6]

Claims 6 and 10 comprise the element of determining a respective displacement vector and trajectory from the acquired images and applying an operation to the same acquired images along the trajectory. As described above, this combination of elements is not taught or suggested in Fogg or Nybo or their combination. Therefore, Claims 6 and 10 are patentable over Fogg in view of Nybo under 35 U.S.C. 103(a) and should be allowed.

[5] In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).
[6] In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d. 1016, 1023 (Fed. Cir. 1996).

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Applicants believe that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited. Should any questions arise, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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